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**CLAIMS**

What is claimed is:

- 5 1. A method for operating a data sharing application in a peer-to-peer network, wherein the application executes on a source node, the method comprising:
- establishing a connection between the source node and a target node in the peer-to-peer network;
- 10 receiving node characterizing data from the target node; and
- displaying the node characterizing data within the application at the source node.
- 15 2. The method of claim 1 further comprising:
- automatically requesting the node characterizing data from the target node in response to establishing a connection with the target node.
- 20 3. The method of claim 1 wherein the node characterizing data contains an optimal connect schedule.
4. The method of claim 1 wherein the node characterizing data contains an information
- 25 classification for data available to be shared by the target node.
5. The method of claim 1 wherein the node characterizing data contains information topology data
- 30 associated with a node connected to the target node.

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6. The method of claim 1 wherein the node characterizing data contains information topology data associated with nodes connected to the target node.

5 7. The method of claim 6 wherein the information topology data is derived from nodes within a specified number of links from the target node.

10 8. The method of claim 1 wherein the node characterizing data contains connection load data for the target node.

15 9. The method of claim 8 wherein the connection load data relates to node fan-out or node fan-in at the target node.

20 10. The method of claim 8 wherein the connection load data relates to a maximum connection load at the target node.

11. The method of claim 8 wherein the connection load data relates to a current connection load at the target node.

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12. An apparatus for operating a data sharing application in a peer-to-peer network, wherein the application executes on a source node, the apparatus comprising:

5        establishing means for establishing a connection between the source node and a target node in the peer-to-peer network;

         receiving means for receiving node characterizing data from the target node; and

10       displaying means for displaying the node characterizing data within the application at the source node.

13. The apparatus of claim 12 further comprising:

15       requesting means for automatically requesting the node characterizing data from the target node in response to establishing a connection with the target node.

14. The apparatus of claim 12 wherein the node characterizing data contains an optimal connect schedule.

15. The apparatus of claim 12 wherein the node characterizing data contains an information classification for data available to be shared by the target node.

16. The apparatus of claim 12 wherein the node characterizing data contains information topology data associated with a node connected to the target node.

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17. The apparatus of claim 12 wherein the node characterizing data contains information topology data associated with nodes connected to the target node.

5 18. The apparatus of claim 17 wherein the information topology data is derived from nodes within a specified number of links from the target node.

10 19. The apparatus of claim 12 wherein the node characterizing data contains connection load data for the target node.

15 20. The apparatus of claim 19 wherein the connection load data relates to node fan-out or node fan-in at the target node.

20 21. The apparatus of claim 19 wherein the connection load data relates to a maximum connection load at the target node.

25 22. The apparatus of claim 19 wherein the connection load data relates to a current connection load at the target node.

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23. A computer program product on a computer readable medium for use in a data processing system for operating a data sharing application in a peer-to-peer network, wherein the application executes on a source node, the  
5 computer program product comprising:

instructions for establishing a connection between the source node and a target node in the peer-to-peer network;

10 instructions for receiving node characterizing data from the target node; and

instructions for displaying the node characterizing data within the application at the source node.

24. The computer program product of claim 23 further  
15 comprising:

instructions for automatically requesting the node characterizing data from the target node in response to establishing a connection with the target node.

20 25. The computer program product of claim 23 wherein the node characterizing data contains an optimal connect schedule.

25 26. The computer program product of claim 23 wherein the node characterizing data contains an information classification for data available to be shared by the target node.

30 27. The computer program product of claim 23 wherein the node characterizing data contains information topology data associated with a node connected to the target node.

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28. The computer program product of claim 23 wherein the node characterizing data contains information topology data associated with nodes connected to the target node.

5 29. The computer program product of claim 28 wherein the information topology data is derived from nodes within a specified number of links from the target node.

10 30. The computer program product of claim 23 wherein the node characterizing data contains connection load data for the target node.

15 31. The computer program product of claim 30 wherein the connection load data relates to node fan-out or node fan-in at the target node.

20 32. The computer program product of claim 30 wherein the connection load data relates to a maximum connection load at the target node.

33. The computer program product of claim 30 wherein the connection load data relates to a current connection load at the target node.

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